



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/699,646	11/04/2003	Tatsuya Suzuki	040302-0355	3943
22428	7590	03/21/2005	EXAMINER	
FOLEY AND LARDNER SUITE 500 3000 K STREET NW WASHINGTON, DC 20007			TRIEU, VAN THANH	
			ART UNIT	PAPER NUMBER
			2636	

DATE MAILED: 03/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/699,646

Applicant(s)

SUZUKI ET AL.

Examiner

Van T Trieu

Art Unit

2636

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11/4/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-13 are rejected under 35 U.S.C. 102(b) as being anticipated by **Nakamura et al** [US 6,044,321].

Regarding claim 1, the claimed a warning apparatus for a vehicle, comprising:
an operation part configured to provide a contact possibility of the vehicle contacting with an object that is present in front of the vehicle according to relative motion between the vehicle and the object (the ICC vehicle is provided with a radar unit 2 and ICC unit 3 for detecting, measuring and calculating a relative distance, a relative speed between the ICC vehicle and the preceding car 50 for automatically controlling the ICC vehicle at a safe distance from the previous car 50, see Figs. 1, see abstract, col. 2, lines 54-67 and col. 3, lines 1-36); and a warning unit configured to provide a contact possibility warning by applying a negative acceleration to the vehicle, the negative acceleration being produced according to a correction value that is set by the warning unit according to the contact possibility and is applied to at least one of the driving force and the braking force of the vehicle (the ICC unit 3 controls to decelerate the ICC vehicle is treated as a negative acceleration by applied a brake force to the vehicle braking

Art Unit: 2636

system according to the estimation of collision, such as the time-to-collision estimate means, the distance adjusting means, the collision-avoidance control means and the estimate braking timed, see Figs. 3-6 and 8-16, col. 3, lines 15-36, col. 6, lines 34-50, col. 8, lines 31-62, col. 13, lines 3-67, col. 14, lines 1-10, col. 15, lines 1-67, col. 16, lines 1-67, col. 17, lines 1-67, col. 18, lines 1-67, col. 19, lines 1-19, col. 21, lines 1-65, col. 32, lines 11-67 and col. 33, lines 1-24); and the controller configured to change the correction value according to a speed of the vehicle (the ICC unit 3 controls to change the judgment values such as estimate braking time T_r and the threshold values T_{c1} , T_{c2} according the relative speed, see Figs. 4 and 16, col. 17, lines 1-67, col. 18, lines 1-67, col. 19, lines 1-19 and col. 32, lines 11-53).

Regarding claim 2, all the claimed subject matters are cited in respect to claim 1 above, and including the first collision time T_r and T_{c1} .

Regarding claim 3, all the claimed subject matters are cited in respect to claim 1 above, and including the second collision time T_r and T_{c2} .

Regarding claim 4, all the claimed subject matters are cited in respect to claims 2 and 3 above.

Regarding claim 5, all the claimed subject matters are cited in respect to claim 4 above, see Figs. 5, 6, 9 and 16:

Art Unit: 2636

Regarding claim 6, all the claimed subject matters are cited in respect to claim 5 above, see Figs. 5, 6, 9 and 16.

Regarding claim 7, all the claimed subject matters are cited in respect to claim 5 above, see Figs. 5, 6, 9 and 16.

Regarding claim 8, all the claimed subject matters are cited in respect to claim 6 above, see Figs. 5, 6, 9 and 16.

Regarding claim 9, all the claimed subject matters are cited in respect to claim 4 above, and including the classifier configured to classify a road on which the vehicle is running (the city road and/or highway road, see col. 21, lines 57-67 and col. 22, lines 1-16).

Regarding claim 10, all the claimed subject matters are cited in respect to claims 4 and 9 above.

Regarding claim 11, all the claimed subject matters are cited in respect to claim 9 above.

Regarding claim 12, all the claimed subject matters are cited in respect to claim 1 above.

Regarding claim 13, the method claimed limitations are met by the apparatus claim cited in respect to claim 1 above.

Conclusion

2. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hibino et al discloses a measuring apparatus for measuring an actual distance between vehicles and comparing the measured distance with a reference distance regarding the braking operation. [US 5,684,473]

Nishino discloses a collision warning system is mounted on a vehicle to issue an alarm when the vehicle approaches near an obstacle running in front of the vehicle. The system detects relative distance, vehicle speed and obstacle speed. [US 5,459,460]

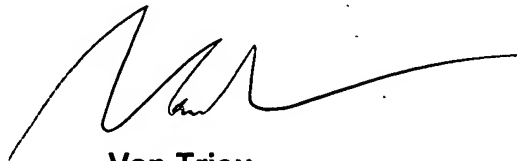
Kunimi et al discloses a vehicle automatic brake system, a distance between a vehicle to be controlled and an obstacle is determined using a distance sensor, a relative velocity with respect to the obstacle is determined from changes of distance with time, a judgment is made, an estimated time for determined of relative speed and relative distance between the vehicle and the obstacle. [US 5,410,484]

3. Any inquiry concerning this communication or earlier communications from examiner should be directed to primary examiner **Van Trieu** whose telephone number

Art Unit: 2636

is (571) 272-2972. The examiner can normally be reached on Mon-Fri from 7:00 AM to 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. **Jeffery Hofsass** can be reached on (571) 272-2981.

A handwritten signature in black ink, appearing to read 'Van Trieu', with a long horizontal flourish extending to the right.

Van Trieu
Primary Examiner
Date: 3/11/05